

# MINOLTA

The essentials of imaging

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## ***DiMAGE® X***

# BEFORE YOU BEGIN

Thank you for purchasing this Minolta product. Please take the time to read through this instruction manual so you can enjoy all the features of your new digital camera.

This manual contains information regarding products introduced before February, 2002. To obtain compatibility information for products released after this date, contact a Minolta Service Facility listed on the back cover of this manual.

Check the packing list before using this product. If any items are missing, immediately contact your camera dealer.

Minolta DiMAGE X digital camera  
Lithium-ion battery NP-200  
Lithium-ion battery charger BC-200  
Hand strap HS-DG100  
8MB SD Memory Card  
AV cable AVC-200  
USB cable USB-500  
DiMAGE software CD-ROM for DiMAGE X  
DiMAGE Image Viewer Utility manual  
Camera manual  
Warranty card

Do not remove the ferrite cores from the cables.

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# FOR PROPER AND SAFE USE

## NP-200 Lithium-ion batteries

The DiMAGE X operates on a small, but powerful lithium-ion battery. Misuse or abuse of the lithium-ion battery can cause damage or injury through fire, electric shock, or chemical leakage.

Read and understand all warnings before using the battery.



## DANGER

- Do not short, disassemble, damage, or modify the battery.
- Do not expose the battery to fire or high temperatures over 60°C (140°F).
- Do not expose the battery to water, or moisture. Water can corrode or damage the internal battery safety devices and cause the battery to overheat, ignite, rupture, or leak.
- Do not drop or subject the battery to strong impacts. Impacts can damage the internal battery safety devices and cause the battery to overheat, ignite, rupture, or leak.
- Do not store the battery near or in metallic products.
- Only use the battery specified in this camera manual.
- Only use the specified charger within the voltage range specified on the charger unit. An inappropriate charger or current may cause damage or injury through fire or electric shock.
- Do not use a leaking battery. If fluid from the battery enters your eye, immediately rinse the eye with plenty of fresh water and contact a doctor. If fluid from the battery makes contact with your skin or clothing, wash the area thoroughly with water.

*(Continued on the next page.)*

# FOR PROPER AND SAFE USE



## WARNING

- Tape over the lithium-ion battery contacts to avoid short-circuiting during disposal; always follow local regulations for battery disposal.
- Only use the battery specified in this manual.
- If charging is not completed after the specified period elapses, unplug the charger and discontinue charging immediately.
- Only use or charge the battery in an environment with ambient temperatures between 0° and 40°C (32° and 104°F) and a humidity of 45% to 85% RH. Only store the battery in an environment with ambient temperatures between -20° and 30°C (-4° and 86°F) and a humidity of 45% to 85% RH.

## General warnings and cautions for product use.

Read and understand the following warnings and cautions for safe use of the digital camera and its accessories.



## WARNING

- Do not disassemble the camera or charger. Electric shock may cause injury if a high voltage circuit inside the product is touched.
- Immediately remove the battery or unplug the AC adapter and discontinue use if the camera is dropped or subjected to an impact in which the interior, especially the flash unit, is exposed. The flash has a high voltage circuit which may cause an electric shock resulting in injury. The continued use of a damaged product or part may cause injuries or fire.
- Keep the battery, memory card, or small parts that could be swallowed away from infants. Contact a doctor immediately if an object is swallowed.
- Store this product out of reach of children. Be careful when around children, not to harm them with the product or parts.

- Do not fire the flash directly into the eyes. It may damage eyesight.
- Do not fire the flash at vehicle operators. It may cause a distraction or temporary blindness which may lead to an accident.
- Do not use the monitor while operating a vehicle or walking. It may result in injury or an accident.
- Do not use these products in a humid environment, or operate these products with wet hands. If liquid enters these products, immediately remove the battery or unplug the power cord, and discontinue use. The continued use of a product exposed to liquids may cause damage or injury through fire or electric shock.
- Do not use these products near inflammable gases or liquids such as gasoline, benzene, or paint thinner. Do not use inflammable products such as alcohol, benzene, or paint thinner to clean these products. The use of inflammable cleaners and solvents may cause an explosion or fire.
- When unplugging the AC adapter or charger, do not pull on the power cord. Hold the plug when removing it from an outlet.
- Do not damage, twist, modify, heat, or place heavy objects on the AC adapter or charger cord. A damaged cord may cause damage or injury through fire or electric shock.
- If these products emits a strange odor, heat, or smoke, discontinue use. Immediately remove the battery taking care not to burn yourself as the battery may become hot with use. The continued use of a damaged product or part may cause injuries or fire.
- Only use the specified AC adapter within the voltage range indicated on the adapter unit. An inappropriate adapter or current may cause damage or injury through fire or electric shock.
- Take the product to a Minolta Service Facility when repairs are required.

## CAUTION

- Do not use or store these products in a hot or humid environment such as the glove compartment or trunk of a car. It may damage the camera, charger, and battery which may result in burns or injuries caused by heat, fire, explosion, or leaking battery fluid.
- If the battery is leaking, discontinue use of the product.
- The camera, charger, and battery temperature rises with extended periods of use. Care should be taken to avoid burns.
- Burns may result if the memory card or battery is removed immediately after extended periods of use. Turn the camera off and wait for it to cool.
- Do not fire the flash while it is in contact with people or objects. The flash unit discharges a large amount of energy which may cause burns.
- Do not apply pressure to the LCD monitor. A damaged monitor may cause injury, and the liquid from the monitor may cause inflammation. If liquid from the monitor makes contact with skin, wash the area with fresh water. If liquid from the monitor comes in contact with the eyes, immediately rinse the eyes with plenty of water and contact a doctor.
- When using the AC adapter and charger, insert the plug securely into the electrical outlet.
- Do not use if the AC adapter or charger cord is damaged.
- Do not cover the AC adapter or charger. A fire may result.
- Do not obstruct access to the AC adapter or charger; this can hinder the unplugging of the units in emergencies.
- Unplug the AC adapter or charger when cleaning or not in use.

## ABOUT THIS MANUAL

The getting up and running section covers how to prepare the camera for use. It contains important information about power supplies and memory cards. The basic operation of this camera is covered in the recording-mode section between pages 20 and 29, and the playback-mode section between pages 50 and 56. Read the data-transfer mode section in its entirety before connecting the camera to a computer.

Many of the features of this camera are controlled with menus. The menu navigation sections concisely describe how to change menu settings. Descriptions of the settings immediately follow the navigation sections.

The appendix contains a troubleshooting section to help answer questions about the operation of the camera. Information covering camera care and storage is also provided. Please store this manual in a safe place.

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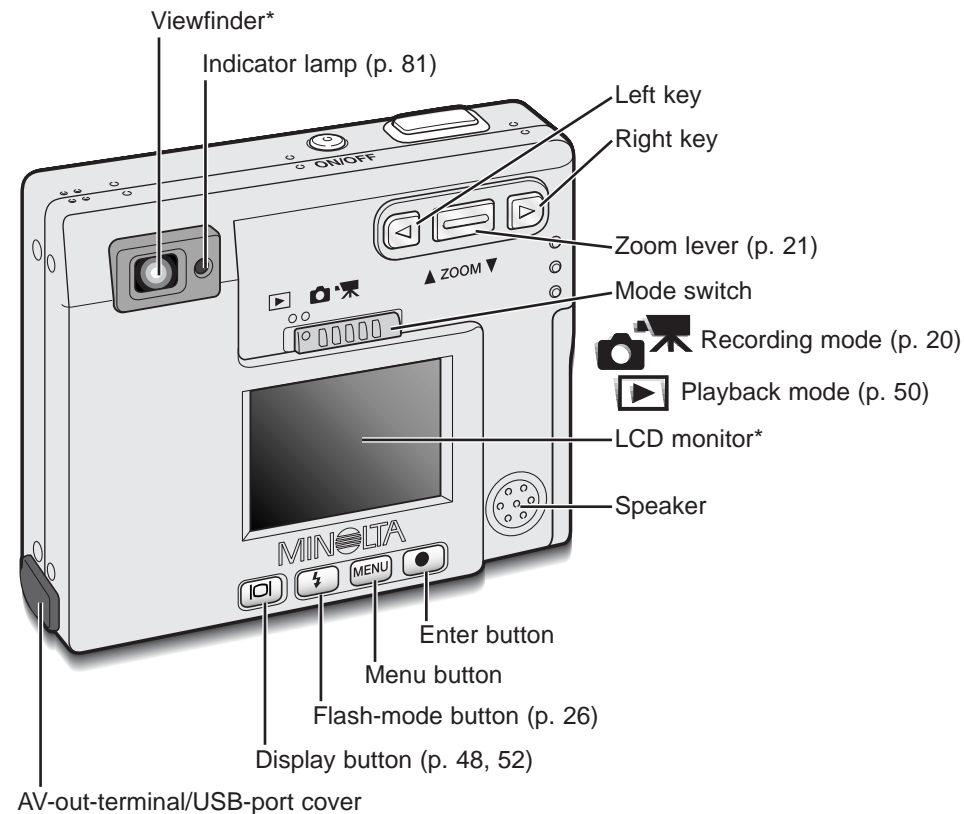
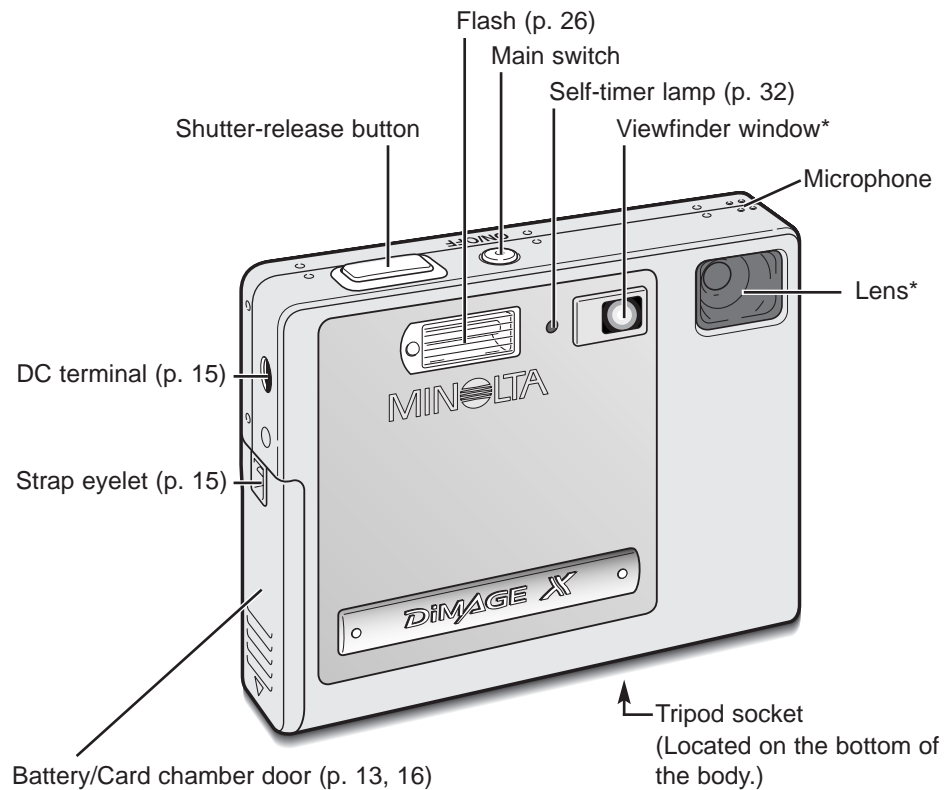
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# NAMES OF PARTS

\* This camera is a sophisticated optical instrument. Care should be taken to keep these surfaces clean. Please read the care and storage instructions in the back of this manual (p. 82).



## GETTING UP AND RUNNING

# GETTING UP AND RUNNING

This section covers how to prepare your camera for use. Details on the use and installation of the battery and memory card are given as well as how to attach the hand strap and optional AC adapter.

## Charging the lithium-ion battery

Before the camera can be used, the lithium-ion battery must be charged. Before charging the battery, read the safety warnings on pages 3 and 4 of this manual. Only recharge the battery with the supplied battery charger. The battery should be recharged before each shooting session. See page 83 for battery care and storage.

Plug the power cord into the charger unit (1).

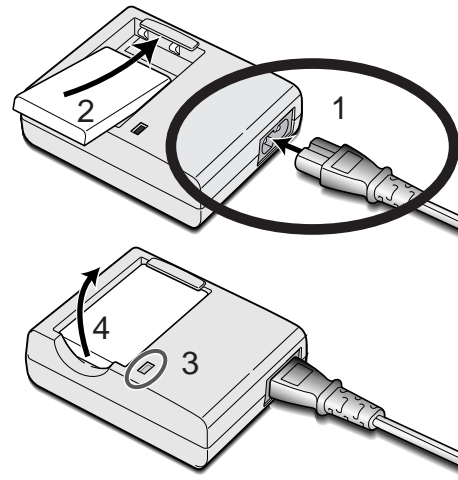
With the battery terminals toward the front and the label face up, slide the battery into the charger (2).

Plug the charger into a live household outlet.

- After a few seconds, the indicator lamp (3) will glow to show the battery is charging. The lamp will go out when the battery has been charged. Charging time is approximately eighty minutes.

Unplug the power cord from the outlet.

Remove the battery from the charger (4).



## Changing the lithium-ion battery

This digital camera uses one NP-200 lithium-ion battery. Before using the battery, read the safety warnings on pages 3 and 4 of this manual. When replacing the battery, the camera should be turned off.

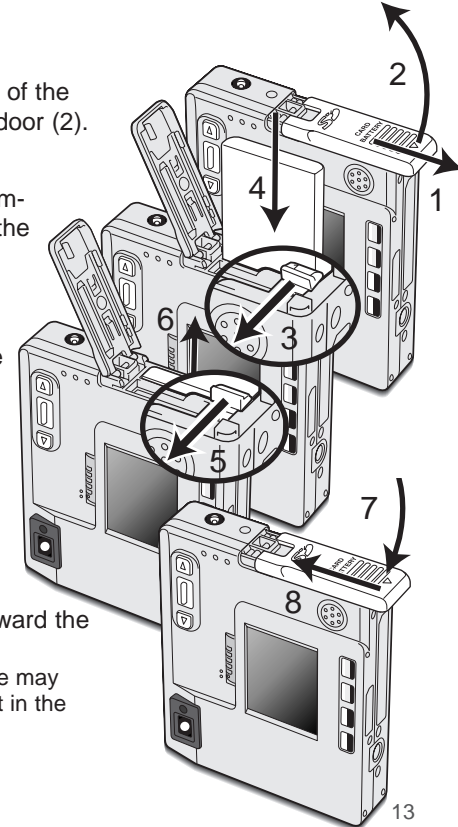
Slide the battery-chamber door toward the bottom of the camera to release the safety catch (1). Open the door (2).

Move the battery latch towards the back of the camera to insert the battery (3). Slide the battery into the battery chamber (4) with the battery terminals first until it is caught by the latch.

To remove the battery, move the latch towards the back of the camera until the battery is released (5). Pull the battery out of the chamber (6).

Close the battery-chamber door (7) and slide it toward the top of the camera to engage the safety catch (8).

- After installing the battery, the set-time/date message may appear on the monitor. The clock and calendar is set in the setup 1 section of the menu (p. 18).



# GETTING UP AND RUNNING

## Battery-condition indicator

This camera is equipped with an automatic battery-condition indicator displayed on the LCD monitor. The icon will change from white to red when battery power is low.



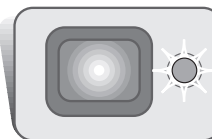
Full-battery icon - the battery is fully charged. This icon is displayed for three seconds when the camera is on or switched between the recording or playback mode.



Half-full-battery icon - the battery is partially charged. This icon is displayed for three seconds. The LCD monitor will turn off when the flash is charging.



Low-battery warning - battery power is very low. The battery should be replaced as soon as possible. This warning automatically appears and remains on the monitor until the battery is recharged. If the power level falls below this level when the camera is on, the battery-exhausted message will appear just before the camera shuts down.



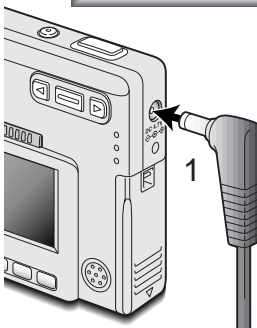
If power is insufficient for camera operation, the indicator lamp next to the viewfinder will turn red and blink for three seconds. The shutter will not release. The battery must be recharged.

## Auto power off

To conserve battery power, the camera will shut down if an operation is not made within three minutes. To restore power, press the main switch. The length of the auto-power-off period can be changed in the setup 1 section of the recording and playback-mode menu (p. 28, 54). When the camera is connected to a computer, the auto-power-off period is set to ten minutes and cannot be changed.

## AC adapter (sold separately)

Do not change the power supply while the camera is on.  
Always turn off the camera before changing between power supplies.

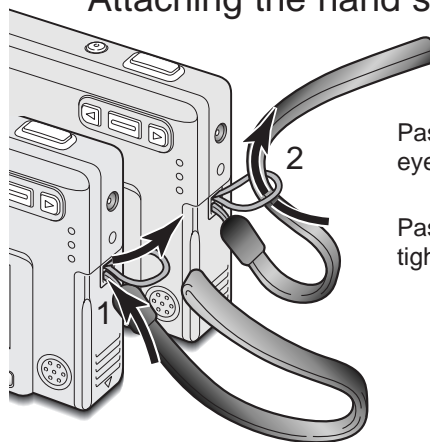


The AC adapter AC-4 or AC-5 allows the camera to be powered from a household outlet. The AC adapter is recommended when the camera is interfaced with a computer or during periods of heavy use. AC adapter model AC-4 is for use in North America, Japan, and Taiwan, and AC-5 is for use in all other areas.

Insert the mini plug of the AC adapter into the DC terminal (1).

Insert the AC adapter plug into an electrical outlet.

## Attaching the hand strap



Always keep the strap around your wrist in the event that the camera is accidentally dropped.

Pass the small loop of the hand strap through the strap eyelet on the camera body (1).

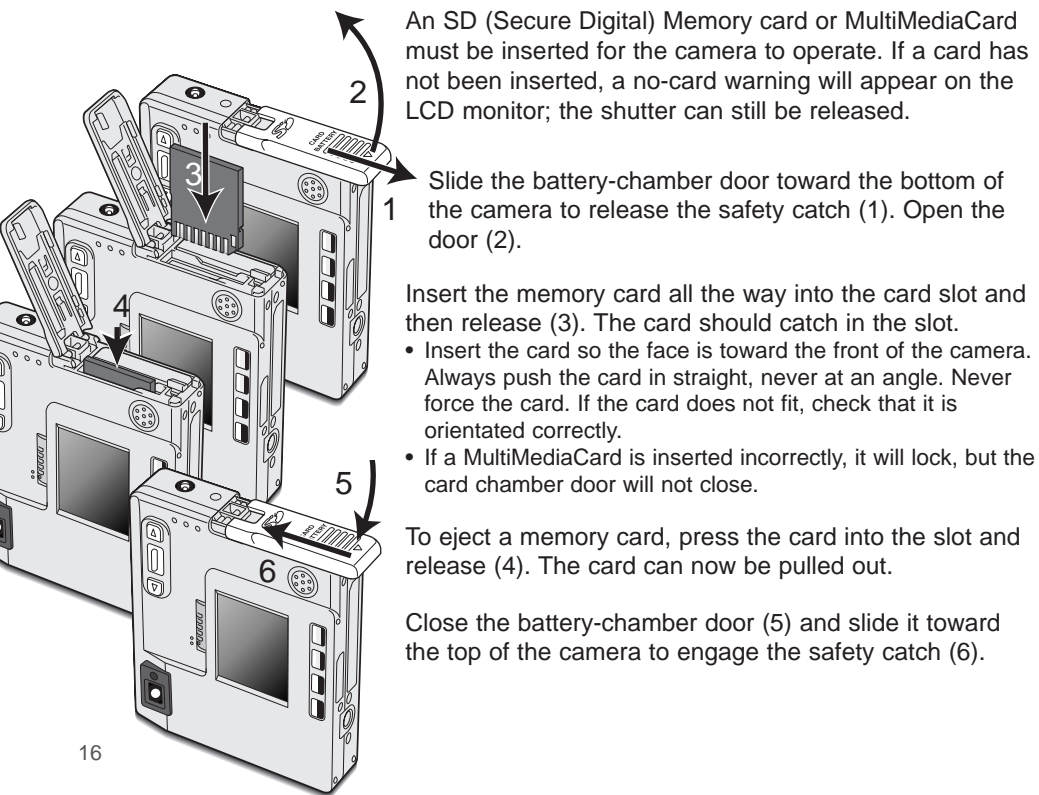
Pass the other end of the strap through the small loop and tighten (2).



# GETTING UP AND RUNNING

## Installing and removing a memory card

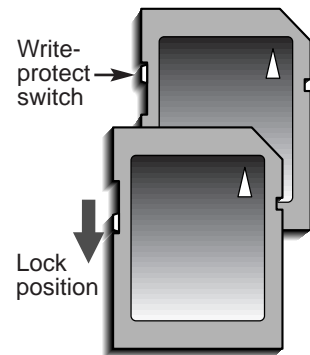
Always turn off the camera and confirm the indicator lamp is not orange and blinking before changing the memory card, otherwise the card may be damaged, and data lost.



## About memory cards

The response time during recording and playback is longer with MultiMediaCards compared with SD Memory Cards. This is not a defect, but rather due to the specifications of the cards. When using large capacity cards, some operations like deletion may take longer.

The SD Memory Card has a write-protect switch to prevent image data from being deleted. By sliding the switch to the bottom of the card, the data will be protected. However, when the card is protected, images cannot be recorded. If an attempt is made to record or delete an image with the camera, the card-locked message will appear and the LED lamps near the viewfinder will turn red and blink quickly. For memory card care and store see page 82.

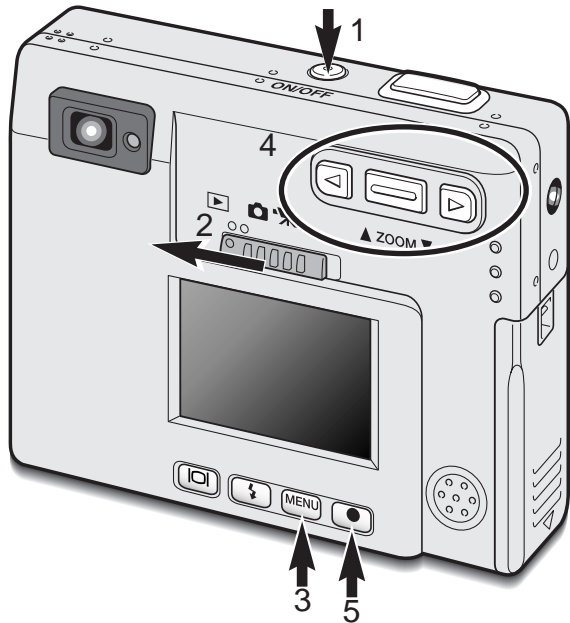


If the unable-to-use-card message appears, the inserted card in the camera may need to be formatted. A card used in another camera may also have to be formatted before being used. A card can be formatted in the setup 2 section of the playback menu (p. 54). When a card is formatted, all the data on the card is permanently erased.

# GETTING UP AND RUNNING

## Setting the date and time

After initially inserting a memory card and charging the battery, the camera's clock and calendar must be set. When images are recorded, the image data is saved with the date and time of recording. Depending on the region, the menu language may also have to be set. To change the language, refer to page 76.



Turn the camera on by pressing the main switch near the shutter-release button (1).

Slide the mode switch to the playback position (2).

The date and time can be set on the playback menu. Navigating the menu is simple. The menu button (3) turns the menu on and off. The zoom lever and left and right keys (4) control the cursor and change settings on the menu. The enter button (5) selects menu options and sets adjustments.



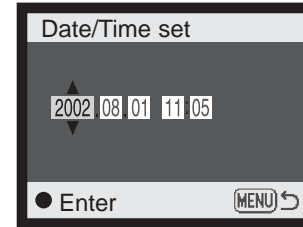
Playback menu: setup 1 section

**MENU** Press the menu button to activate the playback menu.

Use the right key to highlight the setup 1 tab at the top of the menu.

Use the zoom lever to highlight the date/time-set menu option.

Press the right key. "Enter" will appear on the right side of the menu.



Date/Time setting screen

Press the enter button to display the date/time setting screen.

Use the left and right keys to select the item to be changed. Use the zoom lever to adjust the item.

Press the enter button to set the clock and calendar. The playback menu will be displayed.

**MENU** Press the menu button to close the playback menu.

## RECORDING MODE

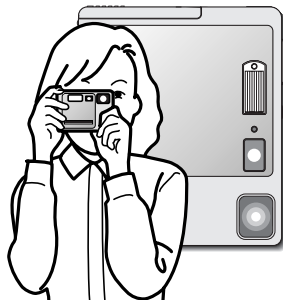
# RECORDING MODE

This section covers the basic recording operation as well as advanced recording functions. To start using the camera, read pages 20 through 29. Many of the recording functions are controlled with menus. The menu navigation sections concisely describe how to change menu settings. Descriptions of the settings immediately follow the navigation section.

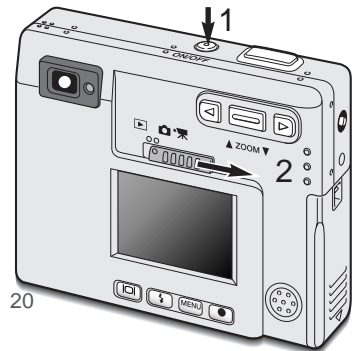
## Handling the camera

While using the viewfinder or LCD monitor, grip the camera firmly with your right hand while supporting the camera body with your left. Keep your elbows at your side and your feet shoulder-width apart to hold the camera steadily.

When taking vertical pictures, hold the camera so that the flash is above the lens with the shutter-release button to the top. Take care not to cover the lens with your fingers or the strap.

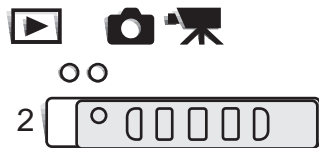


## Setting the camera to record images



Turn the camera on by pressing the main switch (1).

Slide the mode switch to the recording position (2).



## Using the zoom lens

This camera is equipped with a unique 5.7 - 17.1mm zoom lens. This is equivalent to a 37 to 111mm lens on a 35mm camera. The lens is controlled by the zoom lever at the back of the camera.

In 35mm photography, focal lengths below 50mm are referred to as wide-angle; the angle of view is larger than that of the human eye. Above 50mm is referred to as tele-photo and makes distant objects appear closer. The effect of the optical zoom is visible in both the viewfinder and LCD monitor.



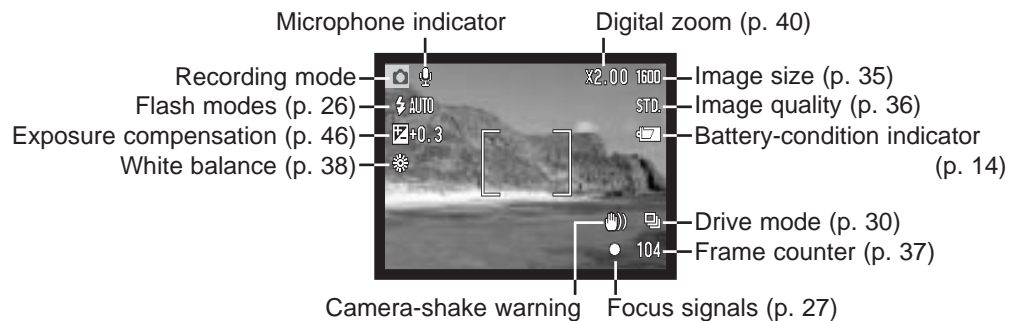
To zoom in on the subject, push the zoom lever up.

To zoom out, push the zoom lever down.

The digital-zoom function can double the power of the lens. The digital zoom is activated in the custom section of the recording-mode menu (p. 28).

# RECORDING MODE

## LCD monitor display - recording mode

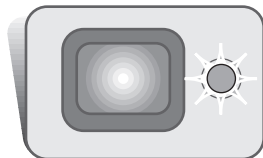


The frame counter cannot exceed 999. When the number of recordable images exceeds this, 999 will be displayed. The frame counter will continue to count down when the number of recordable images falls below one thousand.

## Camera-shake warning

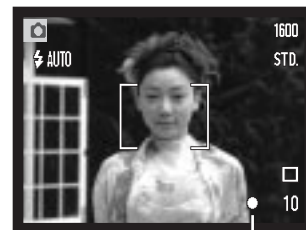


If the shutter speed falls below the point where the camera can be hand held safely, the camera-shake warning indicator will appear on the monitor and the viewfinder indicator lamp will turn green and blink slowly. Camera shake is slight blurring caused by subtle hand motion and is more pronounced at the telephoto position of the lens than at the wide-angle position. Although the warning appears, the shutter can still be released. If the warning appears, place the camera on a tripod or use the built-in flash.



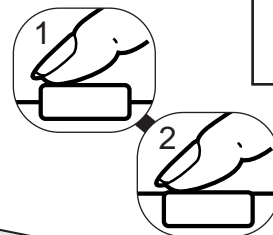
## Basic recording operation

Turn the camera on and slide the mode switch to the recording position.



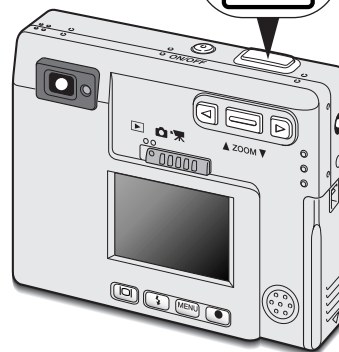
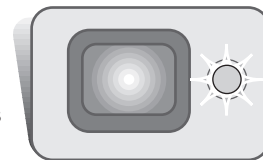
Place the subject within the focus frame on the LCD monitor or center the subject in the viewfinder.

- The focus-lock function (p. 24) can be used with off-center subjects.
- If the subject is closer than 1m (3ft.) at the zoom lens' wide-angle position or 3m (10ft) at the telephoto position, only use the LCD monitor to frame the subject.



Press the shutter-release button partway down (1) to lock the focus and exposure.

- The focus signals (p. 25) on the monitor and the indicator lamp next to the viewfinder will confirm that the image is in focus. If the monitor focus signal is red or the indicator lamp is green and blinks quickly, the camera was unable to focus on the subject. Repeat the previous steps until the focus signal is white and the lamp glows steadily.



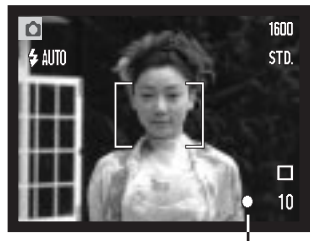
Press the shutter-release button all the way down (2) to take the picture.

- After the shutter releases, the indicator lamp next to the viewfinder will turn orange and blink indicating image data is being written to the memory card. Never remove a memory card while data is being transferred.

# RECORDING MODE

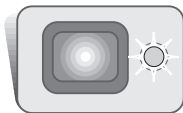
## Focus lock

The focus-lock function is used when you want to compose the image with the subject off-center and outside the focus frame. Focus lock may also be used when a special focusing situation prevents the camera from focusing on the subject. This function is controlled with the shutter-release button.



Place the subject within the monitor focus frame or center the subject in the viewfinder. Press and hold the shutter-release button partway down to lock the focus.

- The focus signal on the monitor and the viewfinder indicator lamp will indicate if the focus is locked.



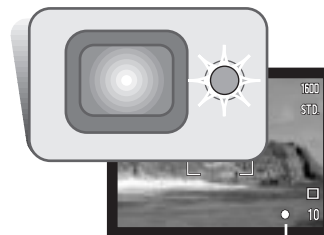
Without lifting your finger from the shutter-release button, recompose the subject within the image area. Press the shutter-release button all the way down to take the picture.

## Focus range

The focus range is 25cm (0.8ft.) to infinity. Both the LCD monitor and viewfinder can be used to frame the subject. However, because of parallax, only the monitor's live image will be accurate with subjects closer than 1m (3ft.) at the zoom lens' wide-angle position or 3m (10ft) at the telephoto position.

## Focus signals

This digital camera has a quick, accurate autofocus system. The focus icon in the lower right corner of the LCD monitor and the indicator lamp next to the viewfinder indicate the focus status. The shutter can be released regardless if the camera can focus on the subject or not.



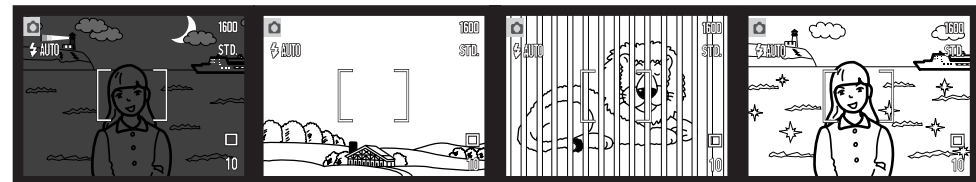
Focus signal

**Focus confirmed** - the LCD monitor focus signal is white and the viewfinder indicator lamp is green and steady.

**Cannot focus** - the LCD monitor focus signal is red and the viewfinder indicator lamp is green and blinking quickly. When the AF system cannot focus, the focus is set to 2m (6.5ft).

## Special focusing situations

The camera may not be able to focus in certain situations. In these situations the focus-lock function (p. 24) can be used to focus on another object at the same distance as your main subject, and then the image can be recomposed to take the picture.



The subject is too dark.

The subject in the focus frame is low in contrast.

Two subjects at different distances overlap in the focus frame.

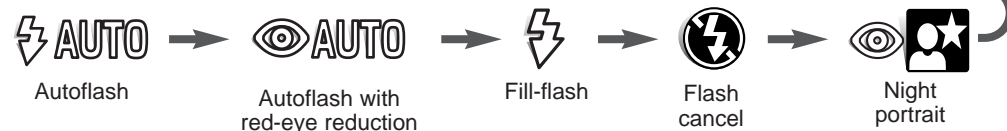
The subject is near a very bright object or area.

# RECORDING MODE

## Flash modes

The flash can be used when taking still images. To set the flash mode, simply press the flash mode button (1) on the back of the camera until the desired mode is displayed. The active flash mode is displayed in the top left corner of the LCD monitor. When the camera is turned off, the flash mode is reset to autoflash with red-eye reduction if autoflash with red-eye reduction or night portrait was last set, if not the mode will be reset to autoflash.

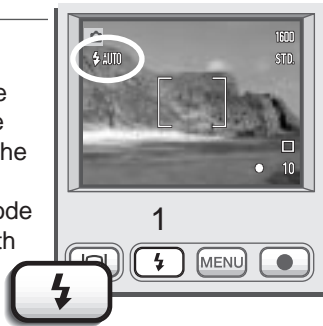
The flash modes are displayed in the following order:



**Autoflash** - the flash fires automatically in low-light and backlit conditions.

**Red-eye reduction** - the flash fires multiple bursts before the main flash burst to reduce red-eye; an effect caused by light reflected from the retina. Use in low-light conditions when taking photographs of people or animals, the pre-flashes contract the pupils of the subject's eyes.

**Fill-flash** - the flash fires with each exposure regardless of the amount of ambient light. Fill-flash can be used to reduce harsh shadows caused by strong direct light or sunshine.



**Flash cancel** - the flash will not fire. Use flash cancel when flash photography is prohibited, natural light is desired to illuminate the subject, or the subject is beyond the flash range. The camera-shake warning may appear when flash cancel is selected (p. 22).

**Night portrait** - for flash portraits at night. The camera automatically balances the flash and background exposures. When taking portraits, ask your subject not to move after the flash burst; the shutter will still be open for the background exposure. The red-eye reduction function is used with night portrait.



## Flash range

The camera automatically controls the flash output. For well-exposed images, the subject must be within the flash range. Because of the optical system, the flash range is not the same at the lens' wide-angle position as it is at the telephoto position.

Wide-angle position

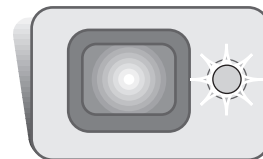
0.25m ~ 2.9m (0.8 ft. ~ 9.5 ft.)

Telephoto position

0.25m ~ 2.3m (0.8 ft. ~ 7.5 ft.)

## Flash signals

The indicator lamp next to the viewfinder indicates the status of the flash. When the lamp is red and blinks quickly, the flash is charging and the shutter will not release. When the lamp turns green, the flash is charged and ready to fire.







# RECORDING MODE


## Navigating the recording-mode menu

Camera operations and recording functions are controlled on the menu. Navigating the menu is simple. The menu button turns the menu on and off. The zoom lever and left and right keys control the cursor and change settings on the menu. The enter button selects menu options and sets adjustments.


**MENU** To activate the recording-mode menu, press the menu button.

 The "Basic" tab at the top of the menu will be highlighted. Use the left/right keys to highlight the appropriate menu tab; the menus will change as the tabs are highlighted.

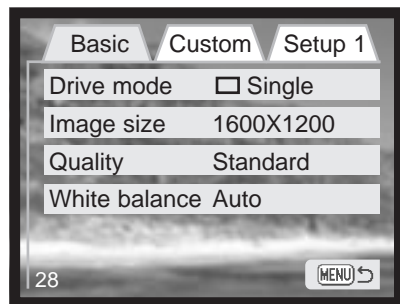
 When the desired menu section is displayed, use the zoom lever to scroll through the menu options. Highlight the option whose setting needs to be changed.


 With the menu option to be changed highlighted, press the right key; the settings will be displayed with the current setting indicated by an arrow.

- To return to the menu options, press the left key.

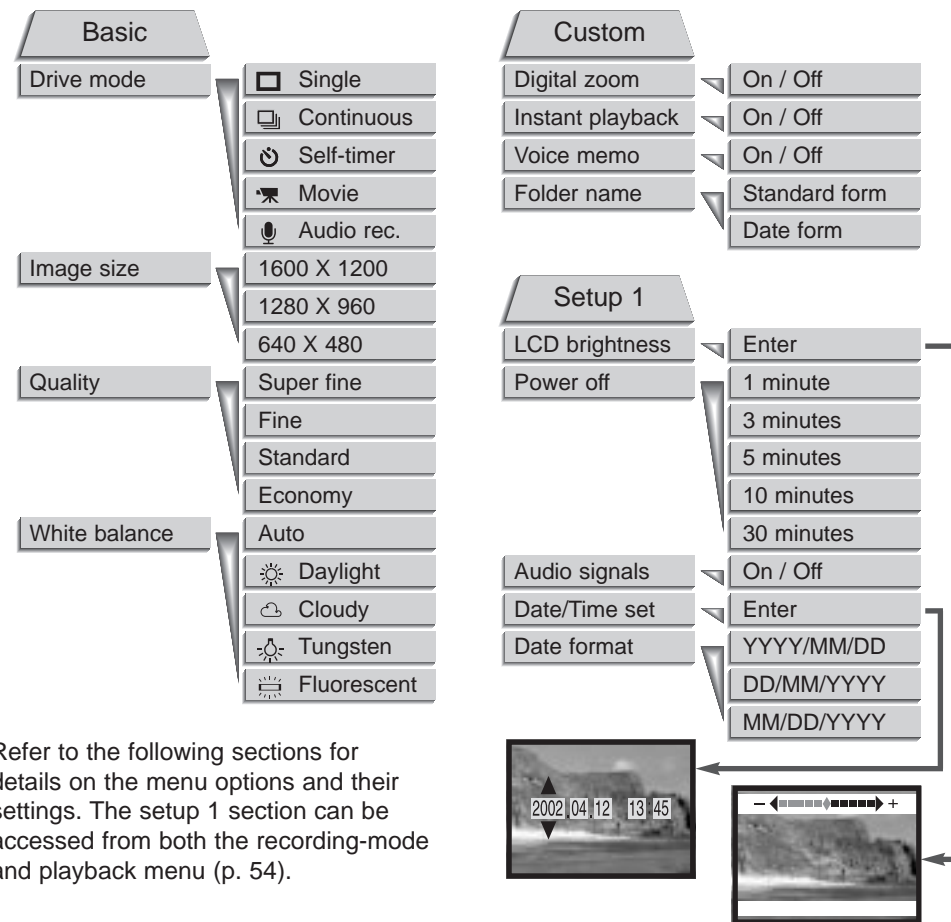
 Use the zoom lever to highlight the new setting.

- If "Enter" is displayed, press the enter button to display the setting screen.



 Press the enter button to select the highlighted setting.

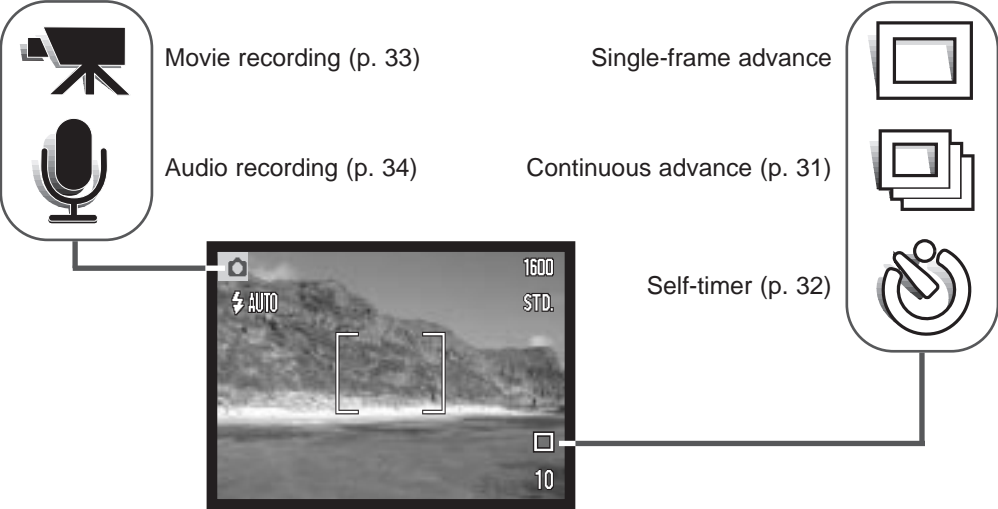
Once a setting has been selected, the cursor will return to the menu options and the new setting will be displayed. Changes can continue to be made. To return to the recording mode, press the menu button.



# RECORDING MODE

## Drive modes

The drive modes control the rate and method images are captured. Icons indicating the selected drive mode appear on the monitor. The drive mode is selected in the basic section of the recording-mode menu (p. 28). When the camera is turned off, the drive mode is reset to single-frame advance.



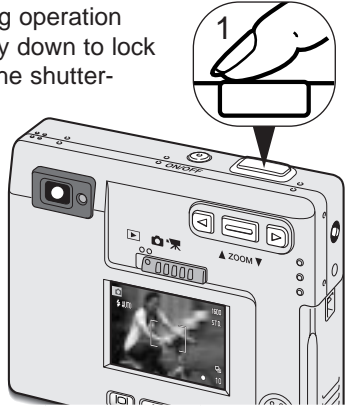
### Single-frame advance

Single-frame advance allows only one image to be captured each time the shutter-release button is pressed. This is the camera's default setting.

## Continuous advance

The continuous-advance drive mode allows a series of images to be captured while holding down the shutter-release button. The number of images that can be captured at one time and the rate of capture depend on the image-quality and image-size setting. With the image-size setting of 1600 X 1200, the maximum rate of capture is 2 fps. If the image quality is set to super fine (p. 36) only one frame can be captured at a time. Continuous advance is selected in the basic section of the recording-mode menu (p. 28).

Compose the picture as described in the basic recording operation section (p. 23). Press the shutter-release button partway down to lock the exposure and focus for the series. Press and hold the shutter-release button all the way down (1) to begin taking pictures. When the shutter-release button is pressed and held, the camera will begin recording images until the maximum number has been taken or the shutter button is released. The built-in flash can be used, but the rate of capture is reduced because the flash must recharge between frames. The frame counter is adjusted after the series has been taken while the images are being saved.



The chart lists the maximum number of images that can be captured with different image-quality and image-size combinations.

Image Quality \ Image Size	1600 X 1200	1280 X 960	640 X 480
Fine	7	11	44
Standard	15	23	81
Economy	29	44	140



# RECORDING MODE

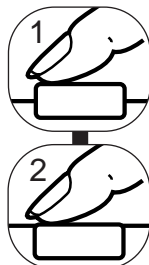
## Self-timer



Used for self-portraits, the self-timer will delay the release of the shutter for approximately ten seconds after the shutter-release button is pressed. The self-timer drive mode is selected in the basic section of the recording-mode menu (p. 28).

With the camera on a tripod, compose the picture as described in the basic recording operation section (p. 23). Focus lock (p.24) can be used with off-center subjects. Press the shutter-release button partway down to lock the exposure and focus (1). Press the shutter-release button all the way down to begin the countdown (2). Because focus and exposure are determined when the shutter-release button is pressed, do not stand in front of the camera when taking a self-timer image. Always confirm the focus with the focus signals before beginning the countdown (p. 25).

During the countdown, the self-timer lamp on the front of the camera (3) will start to blink. A few seconds before the exposure, the self-timer lamp will blink rapidly. The lamp will glow steadily just before the shutter fires. To stop the countdown, press the zoom lever. To stop the countdown and cancel the self-timer, press the main switch. The drive mode will be reset to single-frame advance after the exposure.



## Movie recording



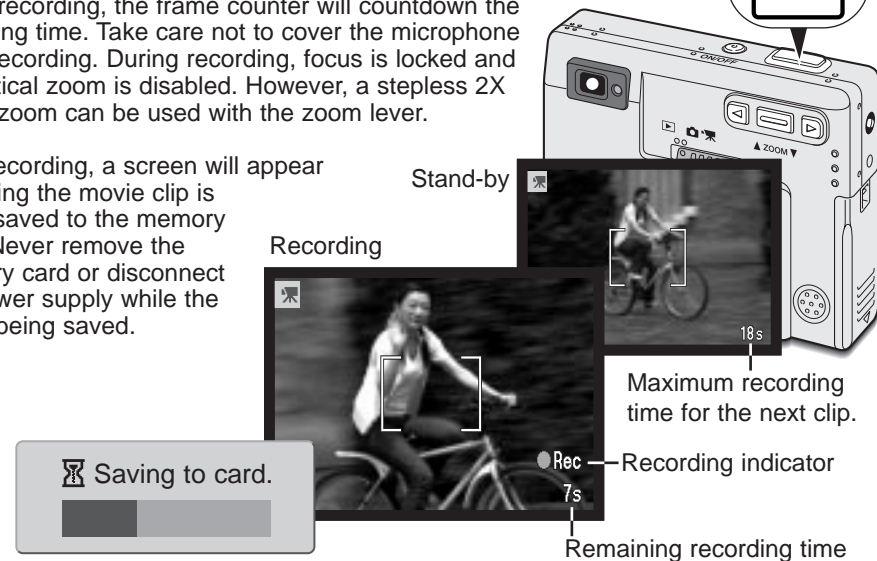
The movie-recording drive mode is selected in the basic section of the recording-mode menu (p. 28). Movie clips up to approximately thirty-five seconds in length with audio can be recorded. The movie image is 320 X 240 pixels (QVGA) and recorded at a rate of around 340KB/s.

Approximately one 19-second movie clip can be stored on one 8MB memory card.

Shooting digital video is simple. Frame the picture on the LCD monitor. Press and release the shutter-release button to begin recording (1); "Rec" will be displayed during recording. The camera will continue to record until the recording time is used or the shutter-release button is pressed again.

When recording, the frame counter will countdown the recording time. Take care not to cover the microphone while recording. During recording, focus is locked and the optical zoom is disabled. However, a stepless 2X digital zoom can be used with the zoom lever.

After recording, a screen will appear indicating the movie clip is being saved to the memory card. Never remove the memory card or disconnect the power supply while the clip is being saved.



# RECORDING MODE

## Audio recording

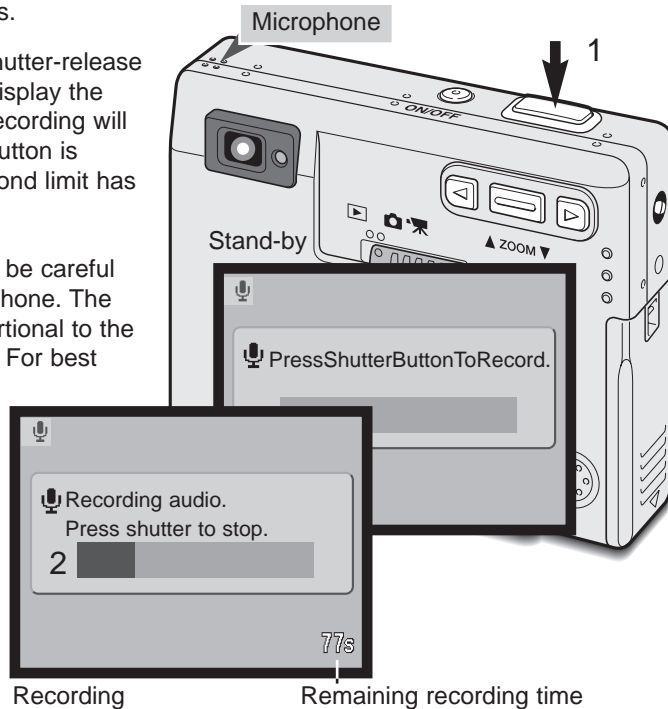


Ninety seconds of audio can be recorded without an image. The audio-recording drive mode is selected in the basic section of the recording-mode menu (p. 28). When the function is active, the live view is replaced with a blue screen.

Approximately 842 seconds of audio can be stored on one 8MB memory card. Audio is recorded at approximately 8KB/s.

To begin recording, press the shutter-release button (1). A bar graph (2) will display the amount of recorded time. The recording will stop when the shutter-release button is pressed again or the ninety-second limit has elapsed.

When making audio recordings, be careful not to touch or cover the microphone. The quality of the recording is proportional to the subject to microphone distance. For best results, hold the camera approximately 20cm (8in) from your mouth.



## Image size



Changing image size affects the number of pixels in each image. The greater the image size, the larger the file size. Choose image size based on the final use of the image - smaller images will be more suitable for web sites whereas larger sizes will produce higher quality prints. Image size must be set before the picture is taken. Image size is set in the basic section of the recording-mode menu (p. 28).

Three image sizes are available: 1600 X 1200 (UXGA), 1280 X 960 (SXGA), and 640 X 480 (VGA). Image size is defined by the image's horizontal and vertical dimensions in pixels. The selected image-size setting is displayed on the LCD monitor by the horizontal dimension only.

If the image size is changed, the frame counter will display the approximate number of images that can be recorded at that setting on the installed memory card. One memory card can contain images with differing sizes.

# RECORDING MODE

## Image quality

This camera has four image-quality settings: super fine, fine, standard, and economy. Always select the desired setting before taking the picture. Image quality is set in the basic section of the recording-mode menu (p. 28).

Image quality controls the rate of compression, but has no effect on the number of pixels in the image. The higher the image quality, the lower the rate of compression and the larger the file sizes. If the economical use of the memory card is important, use the economy mode. Standard image quality is sufficient for normal usage. The super-fine mode will produce the highest quality image and the largest image files.

File formats vary with the image quality setting. Super fine images are saved as a TIFF file. Fine, standard, and economy images are formatted as JPEG files.

If the image quality is changed, the LCD monitor will display the approximate number of images that can be recorded at that setting on the installed memory card. One memory card can contain images with differing qualities.

LCD monitor display		File type
<b>S. FIN</b>	Super fine - the highest-quality image.	TIFF
<b>FINE</b>	Fine - high-quality image.	JPEG
<b>STD</b>	Standard - the default setting.	JPEG
<b>ECON</b>	Economy - the smallest file sizes.	JPEG

## The frame counter and memory card capacity

The number of images that can be stored on a memory card is determined by the size and type of card and the file size of the images. The actual file size is determined by the scene; some subjects can be compressed further than others.

The frame counter indicates the approximate number of images that can be stored on the memory card at the

camera's image quality and size settings. If the settings are changed, the frame counter adjusts accordingly. Because the calculation is based on approximate file sizes, the actual image taken may not change the counter or may decrease it by more than one.

When the frame counter displays three red zeros, it indicates no more images at the image size and quality settings can be captured. Changing the image size or quality settings may allow more images to be captured.

Approximate file sizes.			
Image quality \ Image size	1600 X 1200	1280 X 960	640 X 480
Super fine	5.5MB	3.5MB	0.89MB
Fine	0.93MB	0.60MB	0.17MB
Standard	0.47MB	0.31MB	0.09MB
Economy	0.24MB	0.17MB	0.05MB
Approximate card capacity for an 8MB memory card.			
Super fine	1 image	1 image	7 images
Fine	6 images	10 images	39 images
Standard	13 images	20 images	68 images
Economy	25 images	39 images	117 images

# RECORDING MODE

## White balance

White balance is the camera's ability to make different types of lighting appear neutral. The effect is similar to selecting daylight or tungsten film, or using color compensating filters in conventional photography.

One automatic and four preset white-balance settings are available. When one of the preset white-balance settings is selected, an icon will be displayed on the LCD monitor to indicate the active white-balance setting. White balance is set in the basic section of the recording-mode menu (p. 28).



### Automatic white balance

The automatic white balance compensates for the color temperature of a scene. In most cases, the auto setting will balance the ambient light and create beautiful images, even under mixed-lighting conditions. When the built-in flash is used, the white balance is set for the color temperature of the flash.

### Shooting tips

White balance cannot correct high-energy vapor lighting: sodium-vapor (yellow highway lights), or mercury vapor. For portraits under these lighting conditions, the flash can be used to overpower the ambient light. With landscapes containing these types of lights, set the white balance to the preset daylight setting.

## Preset white balance

Preset white-balance settings must be set before the image is taken. Once set, the effect is immediately visible on the monitor.

To record the ambient light, set the flash mode to flash cancel (p. 26). The built-in flash can be used with preset white-balance, but will create a pinkish or blueish cast with the fluorescent and tungsten settings. The flash is daylight balanced and will produce good results with the daylight and cloudy settings.



**Daylight** - for outdoor and sunlit subjects.



**Cloudy** - for overcast outdoor scenes.



**Tungsten** - for incandescent lighting: household filament light bulbs.



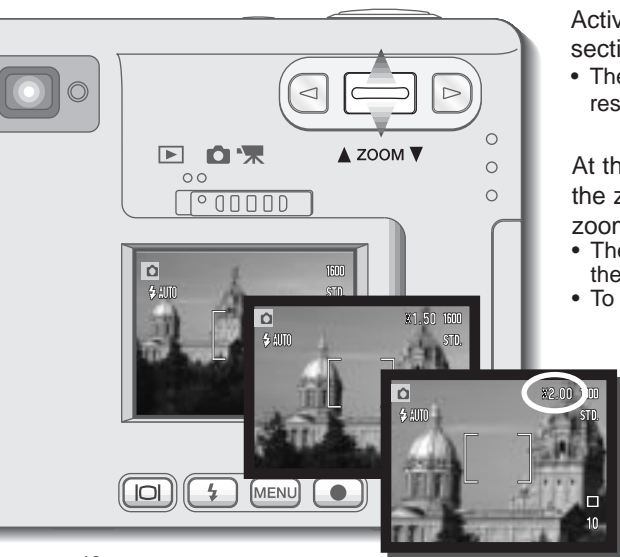
**Fluorescent** - for fluorescent lighting: office ceiling lights.

# RECORDING MODE

## Digital zoom

Assisting the optical zoom is a four-step 2X digital zoom. The digital zoom is activated in the custom section of the recording-mode menu (p. 28).

The digital zoom increases the magnification of the greatest telephoto setting of the optical zoom in four steps: X1.25, X1.50, X1.75, and X2.00. Although the images recorded with the digital zoom are interpolated to the set image size, the quality of the images may not be equal to images taken without the digital zoom. The effect of the digital zoom is visible on the LCD monitor only. The digital-zoom function is canceled if the LCD monitor is turned off (p. 48).



Activate the digital zoom in the custom section of the recording mode menu.

- The digital zoom will remain active until reset on the menu.

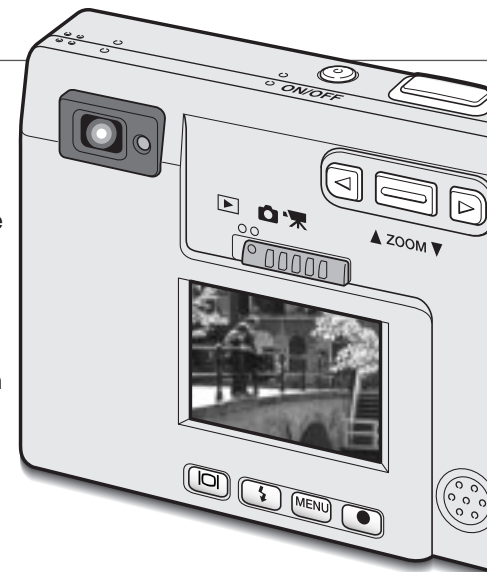
At the maximum telephoto position, press the zoom lever up to engage the digital zoom.

- The zoom magnification will be displayed in the top right corner of the monitor.
- To zoom out, press the zoom lever down.

## Instant playback

After a still image is captured, it can be displayed on the monitor for two seconds before being saved. Instant playback shows the last frame in the series when used with the continuous-advance drive mode (p. 31). When the LCD monitor is turned off (p. 48), it will automatically activate for the instant playback period.

Instant playback can be activated in the custom section of the recording-mode menu (p. 28). When used with voice memo, the audio recording will begin after the image is played back.



## Minolta History



Innovation and creativity has always been a driving force behind Minolta products. The Electro-zoom X was purely an exercise in camera design. It was unveiled at Photokina in Germany in 1966.

The Electro-zoom X was an electronically controlled aperture-priority mechanical SLR with a built-in 30 - 120mm f/3.5 zoom lens giving twenty 12 X 17mm images on a roll of 16mm film. The shutter-release button and battery chamber are located in the grip. Only a few prototypes were built making it one of Minolta's rarest cameras.